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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,698	12/08/2003	Jason D. Hanzlik	10395US01	3984
7590		05/18/2007	EXAMINER	
Imation Corp.		HAUGLAND, SCOTT J		
PO Box 64898		ART UNIT		
St. Paul, MN 55164-0898		PAPER NUMBER		
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		05/18/2007		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/730,698	Applicant(s) HANZLIK ET AL.	
	Examiner Scott Haugland	Art Unit 3654	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2006 and 12 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-11,14-18 and 23-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-11,14-18 and 23-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 6, 10, 14, 15, 17, 23, and 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita et al (U.S. Pat. Appl. Pub. No. 2002/0158161).

Morita et al discloses a tape reel assembly for a data storage tape cartridge comprising: a hub 21 defining a tape winding surface, a flange 22, 23 extending in a radial fashion from an end of the hub, and teeth (of gear 24) integrally formed by the hub.

Morita et al does not disclose that the teeth are formed from a polymer including a lubricating additive.

Morita et al teaches forming elements 4, 6 and integral gear teeth (teeth of gear 42, teeth 63) from a polymer including a lubricating additive (e.g., polytetrafluoroethylene, silicone; par. 119, p. 5) to reduce wear and the resulting powder generated thereby.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the teeth of gear 24 of a polymer including

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polytetrafluoroethylene, silicone or other lubricating additive as taught by Morita et al to reduce wear of the teeth and hub.

Claims 2, 7-9, 11, 16, 18, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita et al (U.S. Pat. Appl. Pub. No. 2002/0158161) as applied to claims 1, 6, 10, 15, and 17 above, and further in view of Boutni (U.S. Pat. No. 4,749,738).

Morita et al is described above.

Morita et al does not disclose a polymer including up to 25%, 2-10%, or 5% by weight of lubricating additive. Morita et al does not disclose polycarbonate that is 20% glass-filled and containing approximately 5% by weight of polytetrafluoroethylene.

Boutni teaches forming machine elements including gears of a compound comprising polycarbonate, 20% glass fiber, and 5% polytetrafluoroethylene (see example 9, col. 10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the hub 21 and integral gear 24 teeth of Morita et al of a polymer having 5% polytetrafluoroethylene lubricant as taught by Boutni to provide the teeth and hub with good strength and wear resistance.

### ***Response to Arguments***

Applicants' arguments filed 9/25/06 have been fully considered but they are not persuasive.

Applicants argue that neither element 4 or element 6 of Morita et al is a hub that defines a tape winding surface. However, hub 21 defines a tape winding surface.

Applicants argue that Boutni does not teach modifying the teeth in Morita et al to include the additives taught by Boutni. However, Morita et al discloses the components of the claimed material composition, but does not give proportions. Boutni teaches proportions of various components used to form a plastic composition that is suitable for forming gears. There would be a more than reasonable expectation of success in the outcome of modifying the Morita et al cartridge to use the plastic composition taught by Boutni due to the similar use disclosed for the Boutni composition. It would have been well within the level of skill of an ordinary artisan to determine a suitable specific composition of the type generally described by Morita et al.

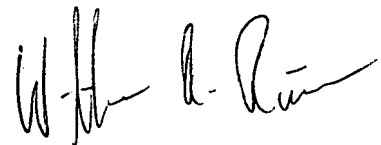
Applicants argue that there is no suggestion in Morita et al to make the rotatable reel gear 24 with a resin containing lubricant since Morita et al teaches providing lubricant to reduce sliding friction and the reel gear 24 teeth are not sliding-contact portions. However, there is inherently sliding contact between the of gear 24 and teeth of gear 13 of drive 11 at least due to engagement and disengagement of the drive with gear 24, inherent misalignment of the axes of the tape reel and drive, and vibration of the tape cartridge or reel relative to the drive. Further, sliding contact is present between hub 21 and lower case 32 and between hub 21 and releasing member 6 which slides in holes 26 in hub 21.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Haugland whose telephone number is (571) 272-6945. The examiner can normally be reached on Mon. - Fri., 10:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

sjh  
5/3/07



**WILLIAM A. RIVERA**  
**PRIMARY EXAMINER**